DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

R00002LA
Revision 2
San Joaquin Helicopters
OH-58A+
OH-58A
OH-58C

September 19, 2003

TYPE CERTIFICATE DATA SHEET NO. R00002LA

This data sheet, which is part of Type Certificate Data Sheet No. R00002LA prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder: San Joaquin Helicopters
1407 South Lexington Street
Delano, CA 93215

I - Model OH-58A+ (Restricted Category Military Surplus Rotorcraft) approved January 29, 1998

Engine: One Allison 250-C20C (T63-A-720) See Note 8

Fuel: ASTMD 1655 JET B. See TM-55-1520-228-10 Table 2.2 for other approved fuels.

Engine Limits

	Torque Pressure Percent	Output R.P.M.	Exhaust Gas Temperature (°C)	Gas Gen. Speed
Takeoff (5 Min.)	100%	100%	810	105%
Max. Cont.	85%	100%	738	105%

Rotor Limits

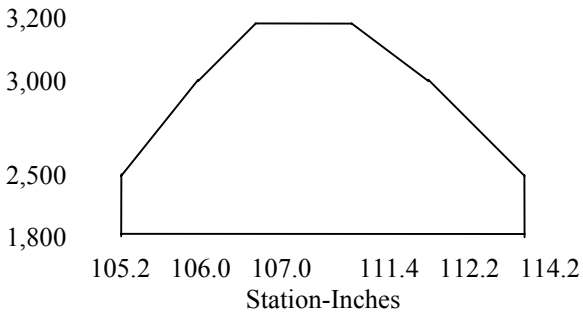
Power Off	Power On
Maximum 390 RPM (Dual tach 110%)	Maximum 354 RPM (Dual tach reading) Rotor 100%
Minimum 330 RPM (Dual tach 93%)	Minimum 347 RPM (Dual tach reading) Rotor 98%

(See Rotorcraft Operators Manual for transient limits.)

C.G. Range

Longitudinal C.G. Limits

(+107.0 To + 111.4) at 3200 lbs.
(+106.0 To + 112.2) at 3000 lbs.
(+105.2 To + 114.2) at 2500 lbs.
(+105.2 To + 114.2) at 1800 lbs.
Straight line variation between points given.
(See chart)



Lateral C.G. Limits
2.6 inches Right
2.4 inches Left

Empty Weight C.G. Range

Longitudinal Limits (+105.2) to (+114.2)

Maximum Weight

3200 lbs.

II. - Model OH-58A (Restricted Category Military Surplus Rotorcraft) approved August 27, 1998

Engine

One Allison 250-C10D (T63-A700) See Note 8

Fuel

ASTMD 1655 JET B. See TM-55-1520-228-10 Table 2.2 for other approved fuels.

Engine Limits

	Torque Pressure PSI	Output R.P.M.	Exhaust Gas Temperature (°C)	Gas Gen. Speed
Takeoff (5 Min.)	92	103%	749	104%
Max. Cont.	79	103%	693	104%

See Rotorcraft Operators Manual TM 55-1520-228-10 for transient limits

Note: Powerplant cooling has been demonstrated to be adequate for the following ambient temperature schedule: 125°F at sea level and decreases by 3.6°F per 1000 feet to the operating maximum altitude of 10,000 feet.

Rotor Limits	Power Off	Power On
	Maximum 390 RPM (Dual tach 110%)	Maximum 354 RPM (Dual tach reading) Rotor 100%
	Minimum 330 RPM (Dual tach 93%)	Minimum 347 RPM (Dual tach reading) Rotor 98%

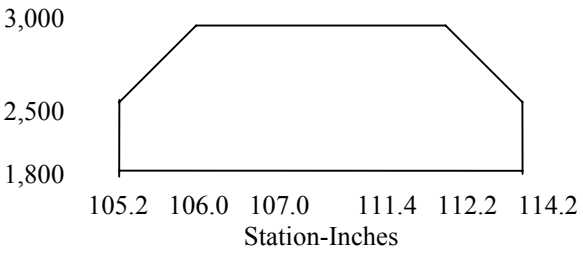
Avoid prolonged operation between 172 and 206 RPM (See Rotorcraft Operators Manual for transient limits)

C.G. Range

Longitudinal C.G. Limits

Station in ins.
(+106.0 To + 112.2) at 3000 lbs.
(+105.2 To + 114.2) at 2500 lbs.
(+105.2 To + 114.2) at 1800 lbs.

Straight line variation between points given.
(See chart)



Empty Weight C.G. Range — Longitudinal Limits (+105.2) to (+114.2)

Maximum Weight — 3000 lbs.

III.- Model OH-58C (Restricted Category Military Surplus Rotorcraft) approved August 27, 1998

Engine — One Allison 250-C20C (T63-A720) See Note 8

Fuel — ASTMD 1655 JET B. See TM-55-1520-228-10 Table 2.2 for other approved fuels.

Engine Limits

	Torque Pressure Percent	Output R.P.M.	Exhaust Gas Temperature (°C)	Gas Gen. Speed
Takeoff (5 Min.)	100%	100%	810	105%
Max. Cont.	85%	100%	738	105%

See Rotorcraft Operators Manual TM 55-1520-228-10 for transient limits

Rotor Limits	Power Off	Power On
	Maximum 390 RPM (Dual tach 110%)	Maximum 354 RPM (Dual tach reading) Rotor 100%
	Minimum 330 RPM (Dual tach 93%)	Minimum 347 RPM (Dual tach reading) Rotor 98%

(See Flight Manual for transient limits)

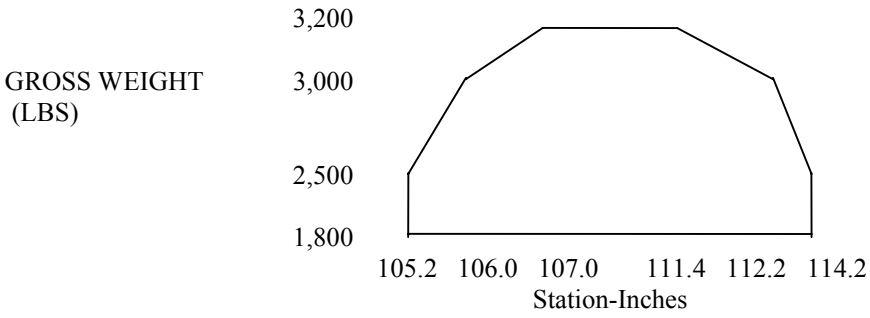
C.G. Range

Longitudinal C.G. Limits

Station in ins.

(+107.0 To + 111.4) at 3200 lbs.
(+106.0 To + 112.2) at 3000 lbs.
(+105.2 To + 114.2) at 2500 lbs.
(+105.2 To + 114.2) at 1800 lbs.

Straight line variation between points given.



Lateral C.G. Limits
2.6 inches Right
2.4 inches Left

Empty Weight C.G. Range — Longitudinal Limits (+105.2) to (+114.2)

Maximum Weight — 3200 lbs.

Data Pertinent To All Models

Airspeed Limits	Never exceed 138 MPH (120 Knots) CAS. Refer to TM 55-1520-228-10 Par. 5-19 for additional information (AIRSPEED LIMITS.) Decrease V_{ne} 3 knots per 1,000 ft. above 3,000 ft. 100 kts. recommended maximum for autorotation
Datum	Station 0 (datum is 1 inch forward of most forward point of fuselage cabin nose section or 55.16 inches forward of jack point center line).
Leveling Means	Leveling means is plumb line from ceiling left rear cabin to index plate on floor.
Minimum Crew	1 at (+65.0)
Number of Seats	See Note 15 (1 at +65.0 and 2 at +104.0)
Maximum Cargo	Total Maximum Cargo Weight of 950 pounds not exceeding 100 lbs. per sq. ft.

between (+77) and (+114)

Fuel Capacity	71.5 gallons (+116.0) 70.3 usable (See TM55-1520-228-10 Par. 5-12 for fuel operations limits).Oil Capacity 11.2 pints (+179.0)
Control Movements	For rigging information refer to Chapter 11 of the Aviation Unit and Intermediate Maintenance Manual TM55-1520-228-23-2.
Serial Nos. Eligible	Refer to San Joaquin Helicopters Serial Number Eligible Report Number SJH 97-011 dated 01/29/98 or later FAA Approved revision. A current copy is on file at the Los Angeles ACO.
Certification Basis	FAR 21.25 (a) (2) effective February 1, 1965, including Amendment 21-1 through 21-42. Type Certificate No. R00002LA issued January 29, 1998, for the Special Purpose of: Agricultural Operations under FAR 21.25(b)(1). Note: In accordance with FAR 36.1(a)(4), compliance with the noise requirements was not shown. Therefore, aircraft certificated under this type certificate are only eligible for agricultural operations excepted by FAR 36.1 (a)(4) and defined under FAR 137.3.

Any alteration to the aircraft for Special Purposes not identified above requires further FAA approval and in addition may require noise and/or flight testing.

General Note: Any subsequent modifications to the helicopters type certified under this Type Certificate are to have the certification basis for that modification established under 14 CFR 21.101 published June 7, 2000 which became effective June 10, 2003. Otherwise non-significant modifications are to meet the requirements of 14 CFR 27 airworthiness standards, normal category, Amendment 4, effective October 27, 1968 and 14 CFR 27.1529, Instructions for Continued Airworthiness, Amendment 18, effective September 11, 1980.

Equipment	The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in or on each helicopter for certification.
Date of Application	August 28, 1996.
Production Basis	None. No helicopter may be produced under this approval. Prior to adding serial numbers to this Type Certificate, each candidate helicopter must undergo a conformity inspection. The conformity inspection will be conducted in accordance with a Type Inspection Authorization, Part 1, or request for conformity that will include as a minimum, the inspections contained in the FAA Rotorcraft Directorate Restricted Category conformity document dated September 25, 2001 or later FAA approved revisions.

Notes

Note 1	A current weight and balance report including a list of equipment included in

the certificated empty weight, and loading instructions when necessary, must be provided for each aircraft at the time of original certification. Refer to Chapter 6 of Operators Manual, TM55-1520-228-10 or Aviation Unit and Intermediate Maintenance Manual, TM55-1520-228-23, Para. 1-44 for C.G. determination.

Note 2

The following placards must be prominently displayed in the cockpit in full view of the pilots:

Placard No. 1

"THIS ROTORCRAFT MUST BE OPERATED IN ACCORDANCE WITH THE RESTRICTED CATEGORY OPERATING LIMITATIONS OF FAR 91.313."

Placard No. 2

"THIS HELICOPTER MUST BE OPERATED IN COMPLIANCE WITH THE OPERATING LIMITATIONS SPECIFIED IN THE APPROVED HELICOPTER OPERATORS MANUAL. REFER TO TM 55-1520-228-10, CHAPTER 5 FOR OPERATING LIMITS AND RESTRICTIONS."

Placard No. 3

VFR OPERATIONS ONLY"

Note 3

The helicopter(s) must be serviced, maintained and inspected in accordance with the documents specified in San Joaquin Helicopters Instructions for Continued Airworthiness Report SJH 97-001 dated 03/07/97, as revised or inspected in accordance with other FAA accepted inspection programs. The TC Holder's Instructions for Continued Airworthiness Report is part of the TC Holder's Instructions for Continued Airworthiness. An FAA approved/accepted copy must accompany each helicopter on delivery.

Note 4

Prior to obtaining an original Airworthiness Certificate:

A. Each helicopter must pass a conformity inspection in accordance with San Joaquin Helicopters Configuration Report SJH 97-004 dated 09/18/97 or later FAA Approved revision. The configuration report also identifies the special purpose modification(s) accomplished on that particular helicopter. San Joaquin Helicopters report SJH 97-014 dated 5/23/97 identifies the Military MWO's accomplished on the helicopter and the MWO's which have been removed. In addition, each helicopter must pass an inspection for any possible hidden damage and the Military Records reviewed for acceptability of any repairs or alterations.

B. The maintenance, overhaul, and modification records of each helicopter must be reviewed for military changes that may affect the airworthiness of the helicopter.

C. After the required inspections, the aircraft must be found to be in a good state of preservation, repair, and in a condition for safe operation.

NOTE 4 (cont'd)

D. A check, by the type certificate holder, of the flight characteristics in accordance with all applicable portions of Sections II and V of U.S. Army Technical Manual 55-1520-228-MTF Maintenance Test Flight Manual, dated November 1, 1988, as appropriate for each aircraft, or other FAA

approved manual.

Note 5 — This aircraft is prohibited from carrying cargo for compensation or hire. Carriage of cargo is limited to such cargo that is incidental to the aircraft owner/operator's business, which is other than air transportation. (This note applies to aircraft that have the special purpose, "Carriage of cargo").

Note 6 — Restricted Category aircraft may not be operated in a foreign country without the express written approval of that country.

Note 7 — This aircraft has not been shown to meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention on International Civil Aviation.

Note 8 — Engine changes are allowed provided the replacement engine is of the same make and model as identified in this TCDS. The replacement engine must have proper records and have the applicable FAA Airworthiness inspection accomplished.

Note 9 — The Airworthiness directives for the helicopter and engine contained in San Joaquin Helicopters, Airworthiness Directives Report SJH 97-005 dated 04/04/97 or later FAA Approved revision, must be complied with prior to original airworthiness certification.

Note 10 — An acceptable method of determining engine cycles from engine total operating time is contained in San Joaquin Helicopters Report Number SJH 97-007 dated 02/17/97 or later FAA Approved revision. This may be used when converting military operating hours to commercial equivalent cycles at the time of initial airworthiness conformity.

Note 11 — When equipment identified in San Joaquin Helicopters, OH-58 Modification Work Orders Report Number SJH 97-014, Revision 1, dated 04/17/98, or later FAA Approved revision is removed, the helicopter center of gravity (CG) will be beyond AFT limits. The pilot shall refer to U.S. Army Model TM55-1520-228-10, Operators Manual (OH-58 A/C Helicopter) to determine the amount of ballast to be installed at Sta. 22.2 in order to return the center of gravity to specified parameters.

Note 12 — OH-58A+, OH-58A, and OH-58C helicopters shall have additional systems installed as follows:

Description	Report Number
Lead Acid Battery Installation	SJH 97-006 Dated 07/02/97 or later FAA Approved Revisions.
Flight Hours Recording Meter Installation	SJH 97-009 Dated 06/30/97 or later FAA Approved Revisions.

Note 13 — Model OH-58A or OH-58C helicopters must be operated in accordance with the operating limitations in the following:

1) Operator's Manual TM 55-1520-228-10, Army Model OH-58A/C Helicopter, dated January 17, 1989, Change 7.

Note 13 (cont'd) — 2) San Joaquin Helicopters RFM Supplement No. 1, Revision 1, dated August 27, 1998, or later FAA approved revision.

3) San Joaquin Helicopters RFM Supplement No. 3, dated August 27, 1998, or

later FAA approved revision with Teledyne Gill G-641 lead-acid battery installed.

Model OH-58A+ helicopter having complied with MWO 1520-228-50-6 which installs the T63-A-720 engine must be operated in accordance with the operating limitations in the following:
1) Operator's Manual TM 55-1520-228-10, Army Model OH-58A/C Helicopter, dated January 17, 1989, Change #7.

2) San Joaquin Helicopters RFM, Supplement No. 1, dated January 12, 1998, or later FAA approved revision.

3) San Joaquin Helicopters RFM Supplement No. 3, dated August 27, 1998, or later FAA approved revision with Teledyne Gill G-641 lead-acid battery installed.

Note 14 — Any alteration to the type design of this aircraft may require Instructions for Continued Airworthiness. These instructions must be submitted and accepted by FTW-AEG, Aircraft Evaluation Group Office, prior to approval for return to service.

Note 15 — No person may be carried in this helicopter during flight unless that person is essential to the purpose of the flight.

Note 16 — Alternate or emergency fuels are listed in TM55-1520-228-10 Chapter 2, Section XIV, Table 2-2. Some limitations apply for the use of certain alternate and emergency fuels. These limitations are listed in this section.

End